

Spencer's, p. 1707.
1707.

12
Apollo Anglicanus:

THE
ENGLISH APOLLO.

Assisting

All Persons in the Right-Understand-
ing of this Years Revolutions, as also of
Things past, present, and to come.

With necessary Tables, plain and useful.
A twofold Kalendar, viz. *Julian* or *English*,
and *Gregorian* or *Foreign* Computations, more
plain and full than any other; with the Rising and
Setting of the Sun, the nightly Rising and Set-
ting of the Moon, and also her Southings, exactly
calculated for every Day. Of general Use for
most Men.

Being the Third after *Bissextile*, or *Leap-Year*.
To which is added the Moon's Application to the
fixed Stars: With the Calculation of the Eclipses: Also
Rules and Tables for the measuring of Timber: With other
things both pleasant, useful, and necessary.

Calculated according to Art, and fitted to the Me-
ridian of *Leicester*, whose Latitude is 52 Degrees, 41 Mi-
nutes, exactly fitting all the middle Counties of *England*, and
without sensible Error the whole Kingdom.

By RICHARD SAUNDER,
Student in the Physical and Mathematical Sciences.

LONDON, Printed by J. Wilde for the
Company of STATIONERS, 1707.

The Julian or Old Ac-
count used in *Engl.* { 1707. } The Gregorian or New
count used in *Engl.* { } Stile used beyond Sea.

17	The Golden Number	17
7	The Dominical Letter	7
23	The Epact	23
23	Shrove Sunday	23
23	Ascension Day	23
1	Whit Sunday	1
30	Advent Sunday	30
February		March
May		June
June		June
November		November

A Table of the Terms and their Returns

Hilary Term begins Jan. the 23, and ends Feb. 12

<i>Effoin-days.</i>	<i>Except.</i>	<i>Ret. Brew. Appear.</i>
Octab. Hilar. Jan. 10	January 21	Jan. 22
Quind. Hilar. Jan. 27	January 28	Jan. 29
Crastin. Purif. Feb. 3	February 4	Febr. 5
Octab. Purif. Feb. 10	February 11	Febr. 12

Easter Term begins April 3oth, and ends May 26th

Quind. Pasch. April 18	April 29	April 30
Tres Pasch. May 5	May 6	May 7
Mens. Pasch. May 12	May 13	May 14
Quinq. Pasch. May 19	May 20	May 21
Crast. Ascet. May 23	May 24	May 26

Trinity Term begins June 13, and ends July 26

Crast. Trin. June 9	June 10	June 11
Octab. Trin. June 16	June 17	June 18
Quind. Trin. June 23	June 24	June 25
Tres. Trin. June 30	July 1	July 2

Michaelmas Term begins Oct. 23, and ends Nov. 2

Tres Mich. Octob. 20	Octob. 21	Octob. 22
Mens. Mich. Octob. 27	Octob. 28	Octob. 29
Crast. Anim. Nov. 3	Novemb. 4	Nov. 5
Crast. Mart. Nov. 12	Novemb. 13	Nov. 14
Octab. Mart. Nov. 18	Novemb. 19	Nov. 20
Quind. Mart. Nov. 25	Novemb. 26	Nov. 27

A Table of the **KINGS** and **QUEENS** of *England*, since the **Conquest**.

	Born Anno	Began to reign. Y. M	Reigned Since their Reigns ended.	Buried at
William 1	1029	1066, Oct. 14	20 11 620, Septem. 9	Caen No.
William 2	1056	1087, Sep. 9	12 11 607, August 2	Winchest
Henry 1	1068	1100, Aug. 2	6 4 512, Decem. 1	Reading
Stephen	1105	1135, Dec. 1	18 11 553, Octob. 25	Feverish.

The Saxon Line restor'd.

Henry 2	1132	1154, Oct. 25	35 9 518, July 6	Founteve.
Richard 1	1155	1189, July 6	9 9 508; April 6	Fountever
John	1165	1199, April 6	17 6 491, Octob. 19	Worcester
Henry 3	1207	1216, Oct. 19	56 1 435, Nov. 16	Westmin.
Edward 1	1239	1272, No. 16	34 8 400, July 7	Westmin.
Edward 2	1283	1307, July 7	19 7 81, Jan. 25	Glocester
Edward 3	1312	1326, Jan. 25	51 5 330, June 21	Westmin.
Richard 2	1366	1377, Jun. 21	22 3 308, Sept. 29	Westmin.

The Line of Lancaster.

Henry 4	1367	1399, Sep. 29	13 6 294, Mar. 20	Canterb.
Henry 5	1386	1412, Mar. 20	9 5 285, Aug. 31	Westmin.
Henry 6	1421	1422, Aug. 31	38 6 246, Mar. 4	Windfor.

The Line of York.

Edward 4	1442	1461, Mar. 4	25 1 2 4, April 5	Winchest.
Edward 5	1471	1483, Apr. 9	0 1 224, June 18	Not kno.
Richard 3	1448	1483, Jun. 18	2 2 222, Aug. 22	Leicest.

The Families United.

Henry 7	1455	1485, Aug. 22	23 8 198, April 23	Westmin.
Henry 8	1491	1509, Apr. 22	37 10 160, Jan. 28	Windfor
Edward 6	1537	1547, Jan. 28	6 5 154, July 6	Westmin.
Qu. Mary 1	1518	1553, June 6	5 4 149, Nov. 17	Westmin.
Qu. Elizab. 1	1533	1558, No. 17	44 4 105, March 24	Westmin.

The Union of the two Kingdoms.

James 1	1566	1602, Ma. 24	22 c 82, March 27	Westmin.
Charles 1	1600	1625, Ma. 27	23 11 18, Janu. 30	Windfor
Charles 2	1630	1648, Jan. 30	36 0 22, Februar. 6	Westmin.
James 2	1633	1684, Feb. 6	4 c 18, Febr. 13	s. Germai.
William & Mary 2	1650	1689, Feb. 13	13 1 5, March 8	Westmin.
Qu. Anne 1	1665	1702, Mar. 8	5 10 13, Decemb. 28	Westmin.

Whom God grant long to Reign.

You here may see a Race of Monarchs Great,
 Each for a time did fill the Royal Seat,
 Then left the Throne : You see it fill'd again.
 Pray God our Queen long time o'er us may reign,
 Her Subjects multiply, Her Foes decrease,
 Her Kingdom have Prosperity and Peace.

A Table shewing the time of the Moon's coming to the South in Hours and Minutes, every Day for the first six Months of this Year, 1707.

Days.	Jan.		February		March		April		May		June	
	H.	M.	H.	M.	H.	M.	H.	M.	H.	M.	H.	M.
1	6A.	55	8A.	26	7A.	29	9A.	10	9A.	22	10A.	7
2	7	48	9	24	8	28	9	53	10	04	10	55
3	8	43	10	22	9	24	10	34	10	46	11	43
4	9	45	11	20	10	17	11	15	11	28	12	31
5	10	48	12	16	11	2	11	57	12	13	OM.	31
6	11	50	OM.	16	11	48	12	40	OM.	13	1	21
7	12	51	1	06	12	29	OM.	40	0	50	2	15
8	OM.	51	1	48	OM.	29	1	25	1	44	3	4
9	1	44	2	30	1	09	3	12	2	38	3	52
10	2	30	3	10	1	52	2	2	3	30	4	40
11	3	14	3	51	2	34	3	57	4	20	5	24
12	3	55	4	34	3	18	4	40	5	11	6	10
13	4	35	5	20	4	5	5	27	6	01	7	00
14	5	16	6	08	4	54	6	15	6	48	7	50
15	5	58	6	56	5	46	7	8	7	33	8	40
16	6	39	7	50	6	40	8	00	8	20	9	36
17	7	24	8	43	7	34	9	53	9	09	10	40
18	8	12	9	36	8	28	10	44	10	3	11	46
19	9	04	10	28	9	20	10	34	11	00	12	52
20	10	02	11	21	10	12	11	26	12	3	1A.	54
21	10	57	12	14	11	02	12	22	1A.	7	2	50
22	11	54	1A.	4	11	52	1A.	22	2	14	3	40
23	12	45	1	54	12	41	2	24	3	12	4	24
24	1A.	35	2	46	1A.	38	3	26	4	7	5	7
25	2	25	3	40	2	35	4	28	5	2	5	49
26	3	12	4	36	3	33	5	28	5	54	6	31
27	4	00	6	33	4	33	6	25	6	38	7	15
28	4	50	6	31	5	32	7	18	7	18	7	14
29	5	42	6	31	6	3	8	00	8	00	8	4
30	6	30	7	28	7	28	8	40	8	41	9	30
31	7	30	8	22	8	22	8	40	9	21	9	31

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A Table-shewing the time of the Moon's coming
to the South in Hours and Minutes, every Day
for the last Six Months of this Year 1707.

D ay	July		August		Septem.		Octob.		Novem.		Decem.	
	H.	M.	H.	M.	H.	M.	H.	M.	H.	M.	H.	M.
1	10	A. 21	11	38	0	M 15	0	M 27	2	M 12	2	M 54
2	11	13	12	30	0	58	1	20	3	16	3	52
3	12	5	0	M 30	1	41	2	18	4	20	4	46
4	0	M. 5	1	18	2	28	3	18	5	16	5	34
5	0	56	2	3	3	24	4	20	6	11	6	16
6	1	46	2	48	4	22	5	22	7	00	6	56
7	2	32	3	36	5	25	6	22	7	4	7	36
8	3	18	4	26	6	28	7	20	8	16	8	17
9	4	4	5	18	7	35	8	15	9	8	9	00
10	4	50	6	16	8	22	9	2	9	50	9	46
11	5	36	7	14	9	15	9	45	10	34	10	34
12	6	26	8	20	10	08	10	27	11	18	11	24
13	7	21	9	22	10	57	11	10	12	4	12	14
14	8	22	10	20	11	42	11	54	12	52	1	A. 8
15	9	25	11	16	12	24	12	40	1	A. 4	1	58
16	10	28	12	7	1	A. 8	1	A. 25	2	30	2	46
17	11	30	12	A. 55	1	52	2	11	3	20	3	32
18	12	30	1	40	2	38	3	00	4	10	4	14
19	1	A. 24	2	24	3	24	3	51	4	56	4	58
20	2	13	3	8	4	11	4	42	5	46	5	42
21	3	00	3	52	5	2	5	32	6	28	6	26
22	3	42	4	36	5	54	6	20	7	14	7	12
23	4	24	5	22	6	45	7	8	8	00	8	4
24	5	6	6	11	7	35	7	56	8	46	9	00
25	5	49	7	2	8	25	8	42	9	37	10	00
26	6	34	7	54	9	14	9	29	10	34	11	8
27	7	21	8	46	10	03	10	17	11	36	12	16
28	8	10	9	38	10	51	11	9	12	40	0	M 16
29	9	00	10	30	11	39	12	4	0	M 40	1	20
30	9	52	11	23	12	27	0	M. 4	1	47	2	18
31	10	47	12	10			1	6			3	10

*To find the Time of High Water in most Ports
of England.*

First seek the Moon's Southing on the foregoing Table for your Day, then you may conclude it High-Water at *Southampton*, *Quinborough* and *Portsmouth*, for there the South and North Moons make a High-Water: But when you desire the time of Full Sea in any of the following Coasts in the ensuing Table, find the name of the Place, and see how many Hours and Minutes be annex'd thereunto in the Column under *H. M.* which added to the time of the Moon's coming to the South, gives the time of High-Water at the Place required.

A Tide Table, with the Names of the Havens.

	H.	M.
<i>Rochester, Malden, Aberdeen,</i>	0	45
<i>Gravesend, Romney, Ramkins,</i>	1	30
<i>London, Tinnmouth, Hartle-pool,</i>	3	0
<i>Frisht, Leith, Dunbar, Narbon,</i>	4	30
<i>Newcastle, Falmouth, Humber,</i>	5	15
<i>Lyn, Antwerp, Plimouth, Hull,</i>	6	0
<i>Bristol, Lanion, Foulness,</i>	6	45
<i>Misford, Bridge-water, North-coast,</i>	7	30
<i>Portland, Peterport, Hartflew,</i>	8	15
<i>Dover, Yarmouth, Harwich, Dublin,</i>	10	30
<i>Calan, Rye, Winchelsea, Calshot,</i>	11	15

Example.

The 22th Day of February this Year, it is required to know the Time of High-Water at *London*: By the Table of the Moon's coming to the South, against the 22th of Feb. I find the Moon South at 1 ho. 4 min. in the morning, then in the Tide-Table above, I find against *London*, 3 ho. 00 min. which being added to 1 ho. 4 min. makes 4 ho. 4 min. the Time of High-Water at *London*, the 20th Day of February, in the morning; the like may be done of any other.

Note, That the Tide floweth considerably more at the New and Full Moons, than at the First and Last Quarters, as also the Latitude of the Moon and Winds may alter it an hour sooner or later.

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Directions for the Subsequent Diary or Almanack.

IN the first Column to the left hand, on the left-hand Page you have the Numerical Figures of the days of the Month. In the second Column you have the week days, and the Dominical Letter.

In the third Column you have the Saints days, and the places of the Planets once a Month; as also the Moons application to the fixed Stars, by which the Afterisins and Constellations may be easily known to an ingenious eye and understanding.

In the fourth Column the Moons place in the Zodiack, every day at noon.

In the fifth Column the rising and setting of the Moon, with respect to her Latitude.

In the sixth Column the Mutual Aspects of the Planets, with the general state of the Weather.

In the first Column on the Right-hand Page you have the English Account.

In the second Column you have the Roman Account, being now 11 days before ours.

In the third Column the Roman Week days.

In the fourth Column the perfect Roman Kalendar, and Saints days.

In the fifth Column you have a discourse of the Clouds, their height, &c.

The sixth, seventh and eighth Columns, the utmost to the Right hand, shew you the daily Rising and Setting of the Sun.

On the top of the Left hand Page is set the New and Full Moons, with the first and last Quarters.

On the top of the Right hand Page is set the Rising, South- ing and Setting of the Planets.

January hath xxxi Days.

- Full Moon the 7th day, at 4 in the morning.
- ☾ Last Quarter the 14th day, at 9 at night.
- ☾ New Moon the 22d day, at 6 at night.
- ☾ First Quarter the 16th day, at 5 at night.

New Years-day.				Moon's Setting.				Moon's Rising.				Moon's Setting.			
1	a	New Years-day.	taur. 6	1	M 12 5	2	1	1	1	1	1	1	1	1	1
2	b	2 n. Pleiades	taur. 30	2	52	3	4	2	4	2	4	5	4	2	4
3	c	2 n. Aldebaran	gem. 5	3	20	4	5	3	5	3	4	6	5	3	4
4	d	2 n. Dex. Pe. Au.	gem. 19	4	40	5	6	4	6	4	5	7	6	4	5
5	e	2 Sund. aft. Chr.	canc. 4	5	00	6	7	5	7	5	6	8	7	5	6
6	f	Epiphany	canc. 18	6	8	7	8	6	8	6	7	9	8	6	7
7	g	2 n. Acellus.	leo 2	7	Full	8	9	7	9	7	8	10	9	7	8
8	a	2 n. Cor. Leonis	leo 16	8	5 A. 31	9	10	8	10	8	9	11	10	8	9
9	b	Sol in Aquarius	leo 29	9	52	10	11	9	11	9	10	12	11	9	10
10	c	2 n. Caud. Leo.	virgo 13	10	13	11	12	10	12	10	11	1	12	10	11
11	d	2 n. Vindemiati.	virgo 25	11	18	12	13	11	13	11	12	2	1	11	12
12	e	1 Sund. pass. Epip.	libra 7	12	44	13	14	12	14	12	13	3	2	12	13
13	f	Hullary	libra 19	13	56	14	15	13	15	13	14	4	3	13	14
14	g	2 n. 27. St.	scorp. 1	14	4	15	16	14	16	14	15	5	4	14	15
15	a	2 n. 28. R.	scorp. 13	15	4	16	17	15	17	15	16	6	5	15	16
16	b	2 n. 29. D.	scorp. 25	16	15	17	18	16	18	16	17	7	6	16	17
17	c	2 n. 9. R.	sagit. 7	17	27	18	19	17	27	17	18	8	7	17	18
18	d	2 n. 14. D.	sagit. 19	18	39	19	20	18	39	18	19	9	8	18	19
19	e	2 Sund. pass. Epip.	capri. 1	19	42	20	21	19	42	19	20	10	9	19	20
20	f	2 n. Ult. Cap.	capri. 14	20	42	21	22	20	42	20	21	11	10	20	21
21	g	S. Agnes	capri. 27	21	36	22	23	21	36	21	22	12	11	21	22
22	a	2 n. Sin. Hum.	aqua. 10	22	New	23	24	22	New	22	23	13	12	22	23
23	b	Term begins	aqua. 23	23	18	24	25	23	18	23	24	14	13	23	24
24	c	2 n. Dex. B. a.	pisces 7	24	48	25	26	24	48	24	25	15	14	24	25
25	d	Convers. S. Paul	pisces 21	25	15	26	27	25	15	25	26	16	15	25	26
26	e	2 Sund. pass. Epip.	aries 5	26	42	27	28	26	42	26	27	17	16	26	27
27	f	2 n. Caud. Geti	aries 19	27	06	28	29	27	06	27	28	18	17	27	28
28	g	2 n. Manker	taur. 3	28	26	29	30	28	26	28	29	19	18	28	29
29	a	2 n. Pleiades	taur. 17	29	06	30	31	29	06	29	30	20	19	29	30
30	b	K. Char. Mark.	gem. 1	30	00	31		30	00	30		21	20	30	
31	c	2 n. Dex. Pe. Au.	gem. 15	31	34			31	34			22	21	31	

Windy Weather, with Snow or cold Rain, and plenty thereof, with some Frost; but about $\Delta \text{ } \frac{1}{2} \odot \Delta \odot \delta$ $\delta \text{ } \frac{1}{2} \delta$ the Full $\odot$ yielding, yet the Frost soon returns and is followed with Wind, also Snow, or cold Rain, $\square \text{ } \frac{1}{2} \delta$ about the 15th or 16th day, and generally very changeable $\odot \odot \text{ } \frac{1}{2} \odot$ and unconstant Weather, sometimes Frost, sometimes Rain, till after the New Moon, then we may expect a Frosty Season, which (except it alter about the $\square \text{ } \frac{1}{2} \text{ } \frac{1}{2}$ 29th day) $\Delta \delta \text{ } \frac{1}{2}$ holdeth Frosty to the $\Delta \text{ } \frac{1}{2} \text{ } \frac{1}{2}$ end.

January 1707.

Saturn and *Mars* are near together at the beginning, and are then South a little after 8 at Night; at the end they are South before 6, and set then about 2 in the Morning. *Jupiter* rises betwixt 6 and 7 at Night; *Venus* at the beginning sets about 6 at Night, but is going to Combustion. *Mercury* rises before the Sun.

Rom. St. days.
Rom. Kalendar.
Foreign Accom.
English Accom.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	7	13	53
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	6	4	54
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	4	2	58
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	3	59
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	5	4	1
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	2	5	2
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	3	6	3
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	4	7	4
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	5	8	5
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	6	9	6
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	7	10	7
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	8	11	8
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	9	12	9
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	10	13	10
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	11	14	11
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	12	15	12
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	13	16	13
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	14	17	14
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	15	18	15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	16	19	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	17	20	17
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	18	21	18
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	19	22	19
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	20	23	20
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	21	24	21
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	22	25	22
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	23	26	23
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	24	27	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	25	28	25
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	26	29	26
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	27	30	27
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	28	31	28
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	29	1	29
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	30	2	30
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	31	3	31
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	4	43

IN my last I treated of the vast Bulk and immense Distance of the fixed Stars, and the innumerable Train of Primary and Secondary Planets that might possibly attend them, and of the Improbability of all these being hurried round the Earth in 24 Hours; or very little more, as must be allowed by them that deny the Motion of the Earth: I shall now come nearer home and speak something of the Clouds, their Altitude or Distance from the Earth, wherein I may possibly seem to bring them as extravagantly near, as I have supposed the other remote. Authors indeed suffer very much in their Height, and their Heights are very different, at different Times and Seasons, and in different Places of the Earth, and indeed in the same Place, and at the same Time, some being abundantly higher than others, though

ther, cold plenty some about ☉ ☌ ull at the turns owed also Rain, it the days, ally geable d un- rather, Frost, Rain, New n we t a os, cept it t the h day) oldeth the end.

February 1707.

Saturn sets about 1 in the Morning. *Jupiter* at the beginning is South at midnight, at the end betwixt 10 and 11 at Night. *Mars* sets betwixt 2 and 3 in the Morning. *Venus* is become our Glorious Morning-Star; rising about break of Day. *M.* rises before the Sun, but cannot be seen.

Rom. Sts. Days
Rom. Kalenda.
Forei. Accompt
*** English Accout**

Days penda. ompt.	Of the Clouds, their Altitude, &c.
112	though not near so high as
113	they are accounted by some
114	Authors: <i>Sennertus</i> , in his
115	Physicks or Natural Philo-
116	sophy, tells us, That some
117	conceive the Clouds not to
118	be above Three Miles di-
119	stant from us, and that
120	some of them are not above
121	half a Mile high; others
122	write that no Cloud is a-
123	bove Nine Miles distant
124	from the Earth; but <i>Vi-</i>
125	<i>tellio</i> is of Opinion, That
126	the Vapours ascend 52000
127	Paces, or 13 German Miles;
128	<i>Cardan</i> , in his Book, <i>D-</i>
129	<i>Subtil. lib. 4. p. 205</i> (as
130	quoted by <i>Sennertus</i>) re-
131	prehends <i>Viellio</i> , and a-
132	vers, that the highest which
133	Vapors amount is 77200
134	Paces, or 193 German
135	miles; but this will not be
136	allowed by those that en-
137	deavour to demonstrate,
138	that the Atmosphere is 27
139	not near the 10th part of
140	the

March hath xxxi days.

Full Moon the 7th day, at 30 min. after 9 in the morning.
 Last Quarter the 15th day, at 1 in the afternoon.

Left Quarter the 15th day, at 1 in the afternoon.

New Moon the 22th day, half an Hour after-6 at night

First Quarter the 29th day, at 9 in the morning.

1	d	David	canc. 10	3	56	Moon's Setting.	windy, cloudy, and
2	e	Quadragesima	canc. 23	4	48		close, with some
3	f	5 n. Aefios	leo 7	5	20		black Frost; then
4	g	D n. Cor. Leon.	leo 21	5	38		follows Snow and
5	a	Ember Week	virg. 3	5	54		cold stormy weather,
6	h	D n. Cand. Leonis	virg. 19	6	8		ther, and continues
7	i	D n. Vindemiæ	virg. 28	Full	25		stues stormy and
8	ii	D n. Spica Virgi	libra 11	7 A	25		* h ♀ cold, with
9	iii	2 Sund. in Lent	libra 23	8	48		* h ☉ ☉ ☉
10	f	Sol in Aries	scorp. 5	10	08		* ♀ some Frost
11	g	D n. Laux Borealis	scorp. 17	11	20		We may also expect
12	a	D n. Cor. Scorpio	scorp. 29	12	28		pe & Snow or cold
13	h	D n. Dex. Gen Op	agit. 11	0 M.	28		Rain about the
14	c	D n. Sinis Man. 7	agit. 23	1	38		day, with high
15	d	D n. Cap. Sagit.	capr. 5	2	46		winds, afterwards
16	e	3 Sund. in Lent	capr. 17	3	44		more calm and
17	f	h II o.o.	capr. 29	4	20		8 ♀ ♀ fair for
18	g	4 ♀ ♀ 22 R.	aqua. 13	4	40		some days, yet
19	a	♂ II 26.	aqua. 26	4	57		some Wind and
20	b	♀ 24.	pices 10	5	12		Δ ♀ ♀ drilling
21	c	Benedict	pices 24	5	25		Rain about the
22	d	♀ γ 26.	aries 9	New	25		lay, and after the
23	e	4 Sund. in Lent	aries 24	7 A	55		* ♀ ♀ New
24	f	D n. Manker	taur. 9	9	25		* ♂ ♀ windy
25	g	Annun. B. V. Mar.	taur. 24	11	00		stormy, and tur
26	a	D n. Aldebaran.	gem. 8	12	36		ulent weather
27	b	D n. Alhaiot	gem. 23	0 M.	36		□ h ♀ Δ ♂ ♂
28	c	D n. Luc. Ped. II	canc. 7	1	54		expected, with
29	d	D n. Cast. & Poll.	canc. 20	2	54		rain, rain, or snow
30	e	5 Sund. in Lent	leo 4	3	40		and some Frost and
31	f	5 n. Cor. Leonis	leo 17	4	00		Δ ♀ ☉ the end.

March 1707.

Saturn sets at the beginning betwixt 11 and 12, at the end he sets about 10 at Night: *Jupiter* at the beginning is South about 10, at the end betwixt 8 and 9 at Night. *Mars* sets between 1 and 2 in the Morning; *Venus* rises about 4 in the Morning. *Mercury* at the beginning is Combuft, at the end he may be seen setting after the Sun.

Rom. St. days
Rom. Calendar
Forein. Accom
English Accom.

Gregory	that height.	Our Coun-	16	18	5	42
Quadrages.	try-man Mr. <i>J. Wing</i> , in his	2	2	16	44	44
Eutichus	<i>Six Years Ephemerides</i> , of-	3	3	14	46	46
Longinus	fers a Demonstration of the	4	4	12	48	48
Herbert	height of the Atmosphere,	5	5	10	50	50
Gertrude	where he makes it 34 miles	6	6	8	52	52
Edward R.	high: I have long since met	7	7	6	54	54
Joseph	with an Author, which I do	8	8	4	56	56
Reminisc.	not now remember, that	9	9	2	58	58
Benedict	made the Altitude thereof	10	10	00	60	60
phrod.	about 45 miles; and <i>Kep-</i>	11	11	5	58	62
Victor	ler in his <i>Epitome Astrono-</i>	12	12	56	4	66
Quirinus	<i>mice Copernicanae</i> , p. 74 and	13	13	54	6	68
N. B. V. M.	75, (supposing it not al	14	14	52	8	10
Cassius	ways of the same height)	15	15	50	12	12
Oculi	hath made the height of	16	16	48	14	14
Gideon	the Atmosphere from $8\frac{1}{2}$	17	17	46	16	16
Eustach	<i>German</i> miles to $11\frac{1}{2}$, which	18	18	44	18	18
Guido	I take to be of our miles	19	19	42	20	20
Balbina	from about 40 to 54, or	20	20	40	22	22
Theodore	some little more, above	21	21	37	23	23
Mary Egy.	which height we cannot	22	22	35	25	25
care	reasonably allow the Va-	23	23	33	27	27
Ambrose	pours to ascend; and there	24	24	31	29	29
Vincent	fore must dissent from <i>Car-</i>	25	25	29	31	31
Sixtus	<i>tan</i> ; however, the height	26	26	26	34	34
Egesippus	of the Clouds is not al-	27	27	24	36	36
Dionysius	ways the same, but various,	28	28	22	38	38
Marcellus	according to the Variety	29	29	20	40	40
Adica	Matter Places, and Times,	30	30	17	43	43
Leo. Pap	and we may often see at	31	31	15	45	45
	the					

April hath xxx Days.

- Full Moon the 6th day, half an Hour past 1 in the morn
- ☾ Last Quarter, the 14th day, at 5 in the morning.
- New Moon the 21st day, at 2 in the morning.
- ☾ First Quarter, the 27th day, at 7 at night.

1	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
2	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
3	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
4	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
5	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
6	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
7	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
8	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
9	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
10	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
11	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
12	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
13	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
14	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
15	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
16	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
17	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
18	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
19	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
20	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
21	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
22	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
23	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
24	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
25	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
26	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
27	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
28	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
29	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
30	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂

April 1707.

Rom. Sts. days.
Rom. Kalendar.
Foreig. Accom.
English Accom.

Saturn sets between 9 and 10 at night. *Jupiter* sets betwixt 2 and 3 in the Morning. *Mars* sets about 1 in the Morning. *Venus* rises about 3 in the Morning. *Mercury* at the beginning may be seen, setting about 2 Hours after the Sun; at the end he is Combuſt.

12	D	Julius	the ſame Time, and in the	15	13	6	47
13	e	Juſtinus	ſame Place, one Cloud to	2	11	49	
14	f	Tiburtius	be much higher from the	3	9	51	
15	g	Perpetua	Earth than another, and ſo	4	7	53	
16	a	Carilius	more ſometimes contrary-	5	5	55	
17	B	Palm-Sun.	ways, the one to the other;	6	3	57	
18	c	Simon	and as <i>Sennertus</i> ſaith, Ex-	7	1	6	59
19	d	Sulpitius	perience ſheweth, that	8	4	59	1
20	e	Simeon	Clouds are not ſo high as ſome i-	9	57	3	
21	f	Quintin	magine: For the Tops of ſome	10	55	5	
22	g	S. George	Mountains reach above the Clouds,	11	53	7	
23	a	Valeria	The Mountains <i>Olympus</i> and	12	51	9	
24	B	Pafcha	<i>thos</i> , are ſaid to be ſo high, that	13	49	11	
25	c	S Mark	Aſhes left upon the Tops of them.	14	47	13	
26	d	Cletus	all the Year, have neither been	15	4	15	
27	e	Anaſtaſius	blown away with the Wind, nor	16	43	17	
28	f	Vitalis	washed away with the Rain. And	17	41	19	
29	g	Pet. de Mil.	ſuch as have ſtood on the Top of	18	40	20	
30	a	Eutropius	<i>Veſuvius</i> , have obſerved, that	19	38	22	
M	B	Quaſimod	ſome Clouds were juſt as high as	20	36	24	
1	c	Athaneſius	the Mountain, and ſome much	21	35	25	
2	d	Inv. Cruci.	<i>Phil</i> and <i>Jacob</i> lower. To which	22	34	26	
3	e	Chriſtoph.	agrees that which <i>Zabarella</i> writes	23	33	27	
4	f	Gothard	in his 8th Chap. <i>Regionib. Aeris</i> ,	24	31	29	
5	g	Jo. Por. La.	I went, ſaith he, to the Top of	25	29	31	
6	a	Juvenal	<i>Venus</i> Mount, which is the higheſt	26	27	33	
7	B	Miferecord	in the Territory of <i>Padua</i> , and	27	25	35	
8	c	Epinath	there I found the Air clear all day	28	23	37	
9	d	Gerdi, &c.	long, but beneath, about the mid-	29	21	39	
10	e	Mimert.	dle of the Mountains, I ſaw the	30	19	41	
			Clouds which hindered me from				
			ſeeing the Vallies, and in the Even-				
			ing being come down from the ſaid				
			Mountain, I found that there had				
			been a great Rain that day, below				
			wherein				

May hath xxxi Days.

● Full Moon the 5th day, at 6 in the afternoon.

Left Quarter the 13th day, at 1 in the afternoon.

● New Moon the 26th day, at ro in the morning.

First Quarter the 27th day, at 6 in the morning.

[illegible]

May, 1707.

Saturn is bid under the Sun Beams, going to Combustion
Jupiter sets between 12 and 1, Mars sets about mid-
night, Venus rises betwixt 2 and 3 in the Morn-
ing; Mercury rises before the Sun, but can scarcely
be seen.

Rom. Sts. days.
Rom. Kalend.
For. Account.
Eng. Account.

112	e	Pancrati	whereas it Rained not at	1	177	43
113	f	Servatius	all on the Mountains top.	2	16	44
114	a	Boniface	<i>Franisf. Pittolhomines de Me-</i>	3	14	46
115	b	Jubilare	<i>ter, Cap. 11. says the same,</i>	4	12	48
116	c	Peregris	how that Men Living upon	5	10	50
117	d	Torpet	high Mountains, or Travel-	6	9	51
118	e	Venant	ling thereupon, have seen	7	8	52
119	f	Potentia	the Rain below them in the	8	6	54
120	g	Dunstan	Vallies; whereas they them-	9	5	55
121	a	Helena	selves have been in clear	10	4	57
122	b	Cantate	Weather: And saith the	11	3	58
123	c	Defiderius	same happened to himself,	12	2	59
124	d	Esther	Travelling over the <i>Alps</i> and	13	1	00
125	e	Urban	<i>Appennine Hills. Agreeable</i>	14	0	1
126	f	Quadrat	to this, is what is related in	15	59	2
127	g	Beda V.	<i>The satirist Geographus, of Da-</i>	16	58	3
128	a	German	<i>vid Frelithus an Hungarian,</i>	17	57	4
129	b	Rogation	when he visited the top of	18	56	6
130	c	Wigand	one of the highest Mountains	19	54	7
131	d	Petronel	in <i>Hungary</i> , a Mountain cal-	20	53	8
132	e	Pamphill	led <i>Stingæ Geburg</i> , one of	21	52	9
133	f	Ascen. D.	the Mountains of <i>Krapack</i> :	22	51	10
134	g	Erasmus	When he had looked from	23	50	11
135	a	Petroch.	the top of the first steep	24	49	12
136	b	Erasmus	Rock to the Vallies, which	25	48	13
137	c	Artemius	he knew were Planted with	26	47	14
138	d	Paulus	huge Trees, he could see no-	27	46	15
139	e	Medardus	thing but a dark and deep	28	45	15
140	f	Barnim.	Air, like the blue Sky in the	29	44	16
141	g	Getulius	Firmament. So that it seem-	30	43	16
142	a	St. Barnab.	ed	31	43	17

June hath XXX days.

- Full Moon the 4th day at 9 in the morning.
- ☾ Last Quarter the 12th day at 2 in the morning.
- New Moon the 18th day at 5 in the afternoon.
- ☾ First Quarter the 25th day at 8 at night.

		Moons Rising		Moons Setting			
		scorp	19	1 M 50			Windy with some
1	Whit-Sunday	scorp.	19	1 M 50			* h ♂ shower
2	Cor. Scorp.	scagit.	1	2			about the 2d an
3	dex. gen. op	scagit.	13	2			4th days, with
4	Ember Week	scagit.	25	Full			misty Mornings
5	n. cap. sagit.	capric.	7	to A 20			and hot weather
6	h II 10.	capric.	19	10 54			* ♀ ☉ with
7	Ω 26.	aquar.	1	11 18			some drilling Rai
8	Trinity Sunday	aquar.	14	11 36			* ♂ ♀ about th
9	Ω 13.	aquar.	27	11 51			9th day; then fol
10	♂ Ω 23.	pisces	10	12 02			lows some fair an
11	♀ S. Barnabas	pisces	23	0 M 2			h t weather, an
12	♂ II 19.	aries	06	0 12			☿ ♀ other
13	Term begins	aries	20	0 22			whiles, some bris
14	n. Manker.	taur.	5	0 33			Winds. But about
15	i Sun. P. Trin.	taur.	19	0 45			* ♀ ☿ the
16	n. Aldebar.	gem.	4	1 05			18th or 19th day
17	n. Alhaiot	gem.	19	1 38			thunder and rain
18	n. luc. ped. II	canc.	4	New			is expected, an
19	n. Cast. & Pol.	canc.	19	9 A 54			is followed with
20	n. Afellos	leo	4	10 14			♂ ☉ ♀ Wind an
21	n. Cor Leonis	leo	18	10 32			a moist Air, the
22	i Sun. P. Trin.	virgo	1	10 50			fair and hot Wea
23	n. caud. leon.	virgo	14	11 06			ther is expected
24	S. John Baptis	virgo	27	11 17			for several days
25	n. Vindem.	libra	10	11 28			☿ ♀ But
26	n. spic. virg.	libra	22	11 39			the end may
27	n. lanx austr.	scorp.	4	11 50			probably pro-
28	n. lanx borea.	scorp.	16	12 3			duce some show
29	S. Peter	scorp.	28	0 M 3			ers of rain.
30	n. cor scorp.	sagit.	10	0 32			

June, 1707.

Saturn and Venus toward the end rise very near together about 2 in the Morning; Jupiter at the beginning sets a little before Midnight, at the end he sets at 10. Mars sets betwixt 10 and 11 at Night. Mercury towards the end is Com-bust.

12	B	Pentecost	ed to him, that if he should	13	438	17
13	C	Cyrillus	have fallen from the Rock,	2	43	17
14	D	Valerius	he should not have fallen to-	3	43	17
15	E	Virus	wards the Earth, but into	4	42	18
16	F	Rulandus	Heaven. As he went up the	5	42	18
17	G	Botolph	third Mountain, he thought	6	42	18
18	A	Marcus	himself environed with very	7	42	18
19	B	Triu. Sun.	thick Clouds and Mists;	8	41	19
20	C	Regina	but when he had gone on	9	41	19
21	D	Walburg.	for some Hours, and was	10	41	19
22	E	Alban	near the top of all, he look-	11	3	19
23	F	Corp. Chr.	ed down to the place where	12	41	19
24	G	St. Jo. Bap.	those Clouds had beset him,	13	41	19
25	A	Amandus	and saw a great many white	14	41	19
26	B	i S. p. Tr.	Clouds compacted, moving	15	42	18
27	C	Sept. Dor.	to and fro; and had a free	16	42	18
28	D	Leo Pap.	Prospect (through the Inter-	17	42	18
29	E	St. Peter	spaces and Distances that	18	43	17
30	F	Lucina	were between them) of the	19	43	17
July 1	G	Fr. Sirith.	Plains below; some of those	20	44	16
2	A	Visit V. M.	Clouds were higher than	21	44	16
3	B	2 S. p. Tr.	other, and many of them	22	45	15
4	C	Ulinus	seemed to be equally distant	23	45	15
5	D	Anselm	from the Earth. From this	24	46	14
6	E	Tranquil.	he inferred, First, that he	25	46	14
7	F	Th. Becket	had passed the beginning of	26	47	13
8	G	Grimbald	the middle Region of the	27	48	12
9	A	Cyrrillus	Air. 2dly, that the distance	28	49	11
10	B	3 S. p. Tr.	of the Clouds from the	29	50	10
11	C	Benedict.	Earth, is not always the	30	51	9
			same,	31	8	5

B 2

July hath XXXI Days.

● Full Moon the 3d day at 11 at night.

(Last Quarter the 11th day at 9 in the morning.

● New Moon the 18th day at 1 in the morning.

First Quarter the 25th day at noon.

1	U	D n. Sin M.	7	fagit.	22	0	50
2	a	Term ends		capric.	4	1	27
3	b	h II 13.		capric.	16	Full	
4	c	u III 1.		capric.	28	9	18
5	d	♂ Ω 29.		aquar.	11	9	40
6	e	4 Sund. p. Tri		aquar.	24	9	55
7	f	♀ ♀ II 25.		pifces	7	10	8
8	g	♀ Ω 13.		pifces	20	10	20
9	a	D n. Algenib.		aries	3	10	32
10	b	D n. Vent. Let.		aries	17	10	44
11	c	D n. Pr. * Chr.		taur.	1	10	58
12	d	Sol in Leo		taua	15	11	16
13	e	5 Sund. p. Tri		taur.	29	11	40
14	f	D n. Alhaiot		gem	13	12	12
15	g	St. Sw within		gem	28	0	12
16	a	D n. Cast. & Pol.		canc.	13	1	00
17	b	D n. Afellos		canc.	27	2	26
18	c	D n. Cap. Leon.		leo	12	New	
19	d	D n. Cor. Leon.		leo	16	9	A00
20	e	6 Sund. p. Tri		virgo	9	9	11
21	f	D n. Aust. Alba.		virgo	23	9	22
22	g	D n. Vindemi		libra	6	9	33
23	a	D n. Spica Virg.		libra	18	9	44
24	b	D n. Lam. Aust.		scorp.	0	9	55
25	c	St. James		scorp.	12	10	7
26	d	D n. Sup. in Fr.		feorp.	24	10	25
27	e	7 Sund. p. Tri		fagit.	6	10	50
28	f	D n. Dex. H. O.		fagit.	18	11	22
29	g	D n. Sin Man.	7	capric.	0	12	3
30	a	D n. Cap. Sagit.		capric.	12	0	M
31	b	D n. Aust. C. w		capric.	24	1	4

Some driffling Rain at the beginning with some brisk Gales of Wind some driffling Rain also about the 6th day; then fair and hot weather
♂ ♀ ♂ for some days. But about the 11th day from showers, with
* ♀ ♂ misty and foggy mornings, and fair and hot
* ♂ ♀ after noons. And about the 18th or 19th days, Thunder and Rain is expected and is followed
♂ ♀ ♂ with high Winds, and some driffling Rain and continue Windy with some Rain about the 26th day
* ♀ ♂ then fair for some time, and windy to the end
□ ♀ ♂ □ ♀

July, 1707.

Saturn at the beginning rises about 2 in the Morning; towards the end he rises about Midnight: Jupiter and Mars at the beginning, Set very near together, between 9 and 10 at Night: Venus rises about 2 in the Morning; Mercury sets after the Sun all this Month.

Rom. Sts. days.
Rom. Kalend.
For. Account.
Eng. Account.

112	D	Nab. &c.	Same, but lesser; or more according to the nature of the Vapour. 3dly, that the nearest distance of the Clouds from the Earth, is not above half a German mile, or two English miles and a half: but they are often nothing near so high here in England, as I have often observed; and that in fair Weather too, when one may reasonably suppose them higher than in a wet and showery time. Kepler in his aforementioned <i>Epid. Astronomiae</i> , p. 70 and 71. where he sheweth how to measure the Altitude of a Cloud, the Question being, <i>Quomodo metimur, Nubis altitudinis</i> . He Answers, <i>Non multo aliter, quam solent alias mensurari distantia rerum in accessarum, ex duabus, &c.</i> In his Scheme, he supposeth and taketh such numbers, as bring the height of the Cloud to be 1666 paces, which is near a mile and two thirds: but I have of-	13	52	8
113	E	Henricus		2	53	7
114	F	Bonavent.		3	54	6
115	G	Swithin		4	55	5
116	A	Kenelm		5	56	4
117	B	S. p. Tr.		6	58	2
118	C	Alexius		73	59	1
119	D	Maternus		84	00	00
120	E	Margaret		94	17	59
121	F	Praxeda		10	3	5
122	G	Mary Mag		11	5	55
123	A	Apollon		12	6	54
124	B	S. p. Tr.		13	7	53
125	C	St. James		14	9	51
126	D	Anna		154	107	50
127	E	Martha		16	11	49
128	F	Panthol		17	12	48
129	G	Beatrix		18	14	46
130	A	Abdon		19	16	44
131	B	S. p. Tr.		20	17	43
132	C	Laminas		21	19	41
133	D	Moses		22	20	40
134	E	Dominic.		23	21	39
135	F	Aristarch.		24	23	37
136	G	Fest. Nivis		254	257	35
137	A	Sixtus		26	27	33
138	B	S. p. Tr.		27	29	31
139	C	Roman		28	31	29
140	D	Theodos.		29	33	27
141	E	Lawrence		304	357	25
142	F	Tyburcius	B 3 ten 31	31	37	23

August hath XXXI days

● Full Moon the 2d day at noon.

☾ Last Quarter the 9th day at 2 in the afternoon.

● New Moon the 16th day at 11 in the morning.

☾ First Quarter the 24th day at 4 in the morning.

● Full Moon the 31st day at midnight.

Lanmas		aquar. 7		2	24	Moons Rising		Moons Setting		drilling at the b	
1	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
2	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
3	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
4	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
5	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
6	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
7	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
8	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
9	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
10	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
11	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
12	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
13	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
14	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
15	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
16	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
17	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
18	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
19	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
20	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
21	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
22	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
23	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
24	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
25	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
26	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
27	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
28	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
29	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
30	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂
31	♂	♂ n. fin. hum. ☾	aquar. 20	Full	♂	♂	♂	♂	♂	♂	♂

August, 1707

Saturn at the beginning rises between 11 and 12 at Night; at the end he rises about 10. Jupiter follows the Sun, but is soon hid, and goeth to Combustion: Mars sets after the Sun: Venus riseth between 3 and 4 in the Morning: Mercury followeth the Sun, but towards the end is Combust.

12	g	Clara V.	ten found them not a mile	1	4	35	7	21
13	a	Hippol.	in height, and that in fair	2	41	19		
14	b	S. P. Tr.	weather in summer time,	3	42	18		
15	c	Af. Mary	when several little compact	4	44	16		
16	d	Rothus	Clouds have very slowly	5	46	14		
17	e	Agapite	floated about; so that it	6	48	12		
18	f	Helena	might easily be discerned	7	50	10		
19	g	Clinton	which Cloud made such a	8	52	8		
20	a	Fausta	certain shadow, as in the fol-	9	54	6		
21	b	S. P. Tr.	lowing Observation, Sept. the	10	56	4		
22	c	Syrphor	17th, 1692. the Altitude of	11	58	2		
23	d	Zachæus	the sun 35 deg. the Altitude	12	50	7		
24	e	St. Bartho	of a certain little Cloud, 20	13	26	58		
25	f	Ludovicus	deg. being in the same Ver-	14	3	57		
26	g	Severin.	tical Line with the Sun; the	15	5	55		
27	a	Ruffus	distance of the shadow of the	16	7	53		
28	b	S. P. Tr.	said Cloud from the station,	17	8	52		
29	c	De-J. Bap.	2304 Yards: Hence is con-	18	10	50		
30	d	Felix	stituted a Triangle of these	19	12	48		
31	e	Paulinus	lines, first the line from the	20	14	46		
Sept. 2	f	Egidius	station to the Cloud, 2dly,	21	16	44		
3	g	Anthony	the line from the Cloud to	22	18	42		
4	a	Manert	the shadow. 3dly, the line	23	20	40		
5	b	S. P. Tr.	from the shadow to the stati-	24	22	38		
6	c	Moses	on, which side is known, as	25	24	36		
7	d	Magnus	also all the Angles: First the	26	26	34		
8	e	Regina	Angle at the station, being	27	28	32		
9	f	Nat. V. M.	the Altitude of the Cloud,	28	30	30		
10	g	Gorgon	20 deg. 2dly the Angle at	29	32	28		
11	a	Hilar. P.	the shadow, being the Com	30	34	26		
12	b	S. P. Tr.	plement	31	36	24		

September hath X X X days.

- ☾ Last Quarter the 7th day at 8 at night.
- New Moon the 14th day at 11 at night.
- ☽ First Quarter the 23^d day at 1 in the morning.
- Full Moon the 30th day at 11 in the morning.

	Moons Rising.	Moons Setting.
1	♏ n. Caud. C. B. pifces 25	♏ A 50
2	♏ n. Algenib. aries 9	♏ 7 5
3	♏ n. Pr. * Ar. aries 24	♏ 7 20
4	♏ n. Manker taur. 8	♏ 7 36
5	♏ n. Pleiades taur. 22	♏ 7 54
6	♏ n. Aldebaran gem. 6	♏ 8 16
7	♏ S. p. Trin gem. 20	♏ 8 56
8	♏ n. Luc Ped. II canc. 4	♏ 10 00
9	♏ n. Cast. & Pol. canc. 18	♏ 11 16
10	♏ n. Afellos leo 2	♏ 12 46
11	♏ n. Cap. Leon. leo 16	♏ M 46
12	♏ n. Pol in Libra leo 29	♏ 2 15
13	♏ n. Caud. Leon virgo 13	♏ 3 43
14	♏ Sun. P. Tr. virgo 26	♏ New
15	♏ n. Vindemiati. libra 9	♏ A 8
16	♏ n. Spica Vir. libra 21	♏ 6 22
17	♏ n. Emb. Week scorp. 4	♏ 6 37
18	♏ II : 8 ad R. scorp. 16	♏ 6 53
19	♏ Vir 17 scorp. 28	♏ 7 13
20	♏ Vir 20 sagit. 10	♏ 7 35
21	♏ St. Matthew sagit. 22	♏ 8 10
22	♏ Vir 29 capric. 4	♏ 9 00
23	♏ Vir 28 capric. 16	♏ 10 08
24	♏ n. Auf. C. w. capric. 28	♏ 11 24
25	♏ n. Lin M. aquar. 10	♏ 12 38
26	♏ n. fin. hum. aquar. 21	♏ M 38
27	♏ n. Dex. Hu. pifces 6	♏ 2 00
28	♏ 16. Sun. P. Tr. pifces 20	♏ 3 26
29	♏ St. Michael aries 14	♏ 4 58
30	♏ n. Gaud. Cel. aries 18	♏ Full

September, 1707.

Saturn at the beginning riseth between 9 and 10 at the end he rises about 8 at night, and is then South about 4 in the morning: Jupiter emergeth from the Sun beams, rising before him: Venus and Mercury rise also before him, Mars sets a little after the Sun.

Rom. Sts. days.
Rom. Kalend.
For. Account.
Eng. Account.

1121	C	Guido	plement of the Sun's Altitude to 180 deg. and is 145 deg. 3dly, the Complement of these 2 Angles to 180, is 15 deg. the Angle at the Cloud; then say as the sine of 15 deg. to the side 2304. so is the sine of 40, to the distance of the Cloud from the shadow, and is 3045: then as the sine of 90, to the aid distance or side last found so is the sine of 35 deg. the Altitude of the sun, to 1747 Vards, the Perpendicular height of the Cloud, or distance of it from the Earth, which is not all out a Mile. But I have often observed, some Clouds not above half so high, as upon the 15th of August last; though at the same time, there were many Clouds that seemed 3 or 4 times as high as these lower, which also moved very little; whilst the lower were carried on it very swiftly, with high Winds; and it is generally observed, that when	15	38	5	22
1122	D	Amatus		2	40	20	
1123	E	Exalt. Cru		3	42	18	
1124	F	Nicomed.		4	44	16	
1125	G	Edith.		5	46	14	
1126	A	Lanpr.		6	48	12	
1127	B	13 S. p. Tr.		7	50	10	
1128	C	Jannuar.		8	52	8	
1129	D	Chaula		9	54	6	
1130	E	St. Matth.		10	56	4	
1131	F	Mauritius		11	58	2	
1132	G	Tercia Vir		12	60	00	
1133	A	Rupert.		13	2	58	
1134	B	14 S. p. Tr.		14	4	56	
1135	C	Cyprian		15	6	54	
1136	D	Cof. & Da.		16	8	52	
1137	E	Wencesla.		17	10	50	
1138	F	St. Micha.		18	12	48	
1139	G	Hierom		19	14	46	
1140	A	Remigius		20	16	44	
1141	B	15 S. p. Tr.		21	18	42	
1142	C	Maximin.		22	20	40	
1143	D	Francis		23	22	38	
1144	E	Constance		24	24	36	
1145	F	Fides		25	26	34	
1146	G	Marcus		26	28	32	
1147	A	Pelagia		27	30	30	
1148	B	16 S. p. Tr.		28	32	28	
1149	C	Burhard		29	34	26	
1150	D	Gideon		30	36	24	

October hath XXXI days.

- ☾ Last Quarter the 7th day at two in the morning.
- ☾ New Moon the 14th day at 3 in the afternoon.
- ☾ First Quarter the 22d day at 7 at night.
- ☾ Full Moon the 29th day at 11 at night.

		Moons Rising		Moons Setting			
Day	Hour	Sign	Time	Sign	Time	Day	Hour
1	1	n. Pr. *	Ar. taur.	3	5 A	45	1
2	6	n. Pleiades	taur.	17	6	10	2
3	1	n. Aldebaran	gem.	2	6	40	3
4	4	n. Alhaiot	gem.	17	7	15	4
5	17	Sund. p. Tr.	canc.	1	7	56	5
6	1	n. Cast. & Pol.	canc.	15	8	56	6
7	1	n. Afeilos	canc.	29	10	30	7
8	1	n. Cap. Leon.	leo	13	12	5	8
9	1	n. Cor. Leon.	leo	26	0	M	9
10	1	n. L. in C. S.	virgo	9	1	30	10
11	1	n. Caud. Leon.	virgo	22	2	55	11
12	1	18 Sund. p. Tr.	libra	5	4	20	12
13	1	Sol in Scorpio	libra	18	5	34	13
14	1	n. Lanc. Aust.	scorp.	0	New	2	14
15	1	h II 17 ix.	scorp.	12	5 A	2	15
16	1	h 17 ix.	scorp.	24	5	22	16
17	1	h 17 ix.	scorp.	6	5	47	17
18	1	h 17 ix.	scorp.	18	6	16	18
19	1	h 17 ix.	capric.	0	6	56	19
20	1	h 17 ix.	capric.	12	7	56	20
21	1	h 17 ix.	capric.	24	9	06	21
22	1	n. L. M. M.	aquar.	6	10	22	22
23	1	Term Begins	aquar.	18	11	46	23
24	1	n. Dex. B. B.	pifces	1	1	M	24
25	1	n. Manchab	pifces	14	1	M	25
26	1	20 Sund. p. Tr.	pifces	28	2	25	26
27	1	n. Caud. Celiaries	pifces	12	3	50	27
28	1	St. Sim. & Jude	aries	26	5	14	28
29	1	n. Manker	taur.	11	Full	0	29
30	1	n. Pleiades	taur.	26	4 A	28	30
31	1	n. Aldebaran	gem.	21	5	00	31

Δ h ☉ δ ♀ ♀
 some drilling rain
 at the beginning,
 then windy and
 Δ h ♀ clearing
 Δ h ♀ up; and
 about the 7th or
 8th days, some
 frosty mornings,
 afterwards windy
 and stormy wea-
 ther is
 ☉ ♀ there is
 expected for some
 days, then more
 temperate; yet
 δ δ ♀ probably
 some cold storm
 about the 18th day
 followed with cold
 drilling rain; an
 about the 21st or
 22d days, high
 winds and turbu-
 lent weather; af-
 terwards
 ☉ δ terward
 clearing up,
 with some light
 * 11 ♀ δ δ ♀
 frosts, and may
 probably continue
 frosty to the end.

October, 1707.

Saturn at the beginning, riseth about 8 at night, and is South about 4 in the morning; at the end he is two hours sooner: Jupiter at the beginning rises a little before 4, at the end he rises between 2 and 3 in the morning: Mars, Venus and Mercury, are all hid by the Sun, and go to Conjunction.

Rom. Id. days.
Rom. Kalend.
For. Account.
Eng. Account.

112	2	Colman	when there are Clouds of se-	16	39	5	21
213	f	Telemach	veral, and very different Al-	2	41		19
314	1	Calixtus	titudes; that the lower	3	43		17
415	3	Hedwig	Clouds move swiftly, when	4	45		15
516	B	17 S. p. Tr.	as the higher move very lit-	5	48		14
617	c	Florent	tle, and sometimes contrary	6	50		10
718	d	St. Luke	to the lower; which shew	7	52		8
819	e	Ptolomy	that the Currents of Winds	8	54		6
920	f	Wendelin	near the Earth, are much	9	56		4
1021	g	Cordula	more swift than at a great	10	58		2
1122	a	40 Vir. M.	distance; and that sometimes	11	00	5	00
1223	B	18 S. p. Tr.	the Current above, is con-	12	2	4	58
1324	c	Salome	trary to that below: As to	13	4		56
1425	d	Crispin	the height of such thin	14	6		54
1526	e	Amandus	Clouds as are sometime seen	15	8		52
1627	f	Ursula	very high in fair Weather,	16	10		50
1728	g	St. Si. & Ju.	'tis difficult to find the	17	12		48
1829	a	Narcissus	height of them, by reason	18	14		46
1930	B	19 S. p. Tr.	that their shadows being	19	16		44
2031	c	Woolfgan	very faint and falling at a	20	18	4	42
21Nov.	d	All Saints	great distance, it is not	21	20		40
22	e	All Souls	easy to find which maketh	22	21		39
23	f	Theophil.	such a shadow. But as to	23	23		37
24	g	Agrist. M	those Clouds that bring	24	25		35
25	a	Latus	us great plenty of Rain,	25	27	+	33
26	B	20 S. p. Tr.	and whose Altitude can-	26	29		31
27	c	Florent	not be so exactly taken;	27	31		29
28	d	Severus	by reason we have not an	28	33		27
29	e	Theodore	Opportunity of seeing where	29	35		25
30	f	Martin P.	their shadows terminate;	30	37	+	23
31	g	Martin Ep.	year	31	38		22

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November hath XXX days.

- ☾ Last Quarter the 5th day at 1 in the morning.
- ☾ New Moon the 13th day at 9 in the morning.
- ☾ First Quarter the 21st day at noon.
- Full Moon the 28th day at 7 in the morning.

All Saints		gem.	26	5	A	44	Moons Rising.		Moons Setting		Days Rising		Days Setting		Days to the end.	
1	d	gem.	26	5	A	44	♂	☉	♂	☉	♂	☉	♂	☉	♂	☉
2	e	canc.	11	7	8	00	and	windy,	and	windy,	and	windy,	and	windy,	and	windy,
3	f	canc.	25	8	9	24	cold	drilling	cold	drilling	cold	drilling	cold	drilling	cold	drilling
4	g	leo	9	9	11	51	or	snow,	or	snow,	or	snow,	or	snow,	or	snow,
5	a	leo	23	11	12	17	tinues	moist:	tinues	moist:	tinues	moist:	tinues	moist:	tinues	moist:
6	b	virgo	6	12	13	40	about	the 7th	about	the 7th	about	the 7th	about	the 7th	about	the 7th
7	c	virgo	19	0	M	40	high	winds	high	winds	high	winds	high	winds	high	winds
8	d	libaa	2	2	2	00	bulent	weather	bulent	weather	bulent	weather	bulent	weather	bulent	weather
9	e	libaa	14	3	3	19	expected;	after-	expected;	after-	expected;	after-	expected;	after-	expected;	after-
10	f	libaa	27	4	4	34	ward	more	ward	more	ward	more	ward	more	ward	more
11	g	scorp.	9	5	5	48	♂	h	♂	h	♂	h	♂	h	♂	h
12	a	scorp.	21	7	7	2	about	the 12th	about	the 12th	about	the 12th	about	the 12th	about	the 12th
13	b	scorp.	3	8	8	52	day;	some	day;	some	day;	some	day;	some	day;	some
14	c	scorp.	15	4	A	11	sharp	winds,	sharp	winds,	sharp	winds,	sharp	winds,	sharp	winds,
15	d	scorp.	27	4	5	52	a	frosty	a	frosty	a	frosty	a	frosty	a	frosty
16	e	capric.	9	5	5	45	♂	h	♂	h	♂	h	♂	h	♂	h
17	f	capric.	21	6	6	50	tinue	frosty	tinue	frosty	tinue	frosty	tinue	frosty	tinue	frosty
18	g	aquar.	3	8	8	00	some	days:	some	days:	some	days:	some	days:	some	days:
19	a	aquar.	15	9	9	24	which,	the	which,	the	which,	the	which,	the	which,	the
20	b	aquar.	27	10	10	48	rising,	bringeth	rising,	bringeth	rising,	bringeth	rising,	bringeth	rising,	bringeth
21	c	pisces	10	12	12	08	☐	♂	☐	♂	☐	♂	☐	♂	☐	♂
22	d	pisces	23	0	M	08	♂	h	♂	h	♂	h	♂	h	♂	h
23	e	aries	6	1	1	24	or	snow,	or	snow,	or	snow,	or	snow,	or	snow,
24	f	aries	20	2	2	40	nues	stormy	nues	stormy	nues	stormy	nues	stormy	nues	stormy
25	g	taur.	4	4	4	06	♂	h	♂	h	♂	h	♂	h	♂	h
26	a	taur.	19	5	5	40	till	after	till	after	till	after	till	after	till	after
27	b	gem.	4	7	7	16	day,	then	day,	then	day,	then	day,	then	day,	then
28	c	gem.	19	4	4	19	frosts	are	frosts	are	frosts	are	frosts	are	frosts	are
29	d	canc.	5	5	5	40	yet	generally	yet	generally	yet	generally	yet	generally	yet	generally
30	e	canc.	20	5	5	40	constant	weather	constant	weather	constant	weather	constant	weather	constant	weather
							to	the	to	the	to	the	to	the	to	the

November 1707.

Saturn at the beginning is South about 2 in the morning; at the end he is South at Midnight: Jupiter rises between 1 and 2 in the morning: Mars and Venus are hid under the Sun Beams; Mercury sets after the Sun, but can scarcely be seen.

Rom. Sts. days.
Rom. Kalend.
For. Account.
Eng. Account.

112	a	Ludovic.	yet we may conclude them	17	39	4	21
113	b	21 S. p. I.	very low. For the reason	2	41	19	
114	c	Frederic.	that others that appear	3	43	17	
115	d	Leopold	much higher, are found	4	45	15	
116	e	Othmarus	(as before is observed)	5	46	14	
117	f	Hugo	not a Mile high: Also	6	48	12	
118	g	Oct. Mart.	from great Thunder show-	7	49	11	
119	a	Elizabeth	ers, it may be concluded,	8	51	9	
120	b	22 S. p. I.	that the Clouds are very	9	52	8	
121	c	Obl. V. M.	low; for it hath been of-	10	54	6	
122	d	Cæcilia	ten Observed, that the	11	55	5	
123	e	Clement	Thunder, which with the	12	57	3	
124	f	Chrysog.	Lightening, hath been in	13	58	2	
125	g	Catharin	some places very terrible,	14	00	00	
126	a	Conradus	and done much harm;	15	13	59	
127	b	Advent	hath been heard very lit-	16	2	58	
128	c	Ruffus	tle, or not at all, at 10	17	4	56	
129	d	Saturnus	or 12 Miles distance; which	18	5	55	
130	e	S. Andrie	sheweth that it must be	19	6	54	
131	f	Eligius	very near where it was	20	8	53	
132	g	Cassian	so terrible: Otherwise in	21	8	52	
133	a	Libanus	would have been more	22	9	51	
134	b	2 S. Adv.	heard at the distance of	23	10	50	
135	c	Sabina	10 or 12 Miles. But the	24	11	49	
136	d	Nicholas	Distance of that part of	25	12	48	
137	e	Agath. M.	Cloud, from whence the	26	13	47	
138	f	Con. V. M.	Thunder comes, may near-	27	14	46	
139	g	Cyprian	ly be computed, by a nice	28	15	45	
140	a	Elatir	comparing the space of time	29	15	45	
141	b	3 S. Adv.	berwixt the Lightening	30	16	44	
			and				

December bath X X X I days.

• Last Quarter the 5th day at 1 in the morning.

☾ New Moon the 13th day at 4 in the morning.

First Quarter the 21st day at 2 in the morning.

Full Moon the 27th day at 5 ar night.

[illegible]

December, 1797.

Saturn at the beginning is South betwixt 11 and 12; at the end, he is South between 9 and 10 at night: Jupiter at the beginning, rises about midnight, at the end he rises between 10 and 11 at night: Mars and Mercury rise a little before the sun: Venus sets a little after him.

Rom. Sts. days.
Rom. Kalend.
For. Account.
Eng. Account.

112	C	Valerius	and the Clap of Thun-	13	163	44
113	D	Lucia	der following, with the	12	17	43
114	E	Nicasius	report of Guns heard at	3	17	43
115	F	Abraham	a Distance: As suppose a	4	18	42
116	G	Ananias	Gun discharged at a Mile,	5	18	42
117	A	Lazarus	or at a greater certain di-	6	18	42
118	B	S. Advent	stance, and the seconds of	7	18	42
119	C	Loth	time nicely accounted, be-	8	19	41
120	D	Ammon	twixt the Firing, and	9	19	41
121	E	St. Thomas	the time that the Report	10	19	41
122	F	30 Mart.	shall come to the Ear of	11	19	41
123	G	Victor	him that is at such a	12	19	41
124	A	Ignatius	certain Distance: These Se-	13	19	41
125	B	Christmas	conds compared with the	14	19	41
126	C	St. Stephen	Seconds betwixt the Light-	15	18	42
127	D	St. John	ning and the Thunder,	16	18	42
128	E	Innocents	will nearly determine the	17	18	42
129	F	Jonathan	distance thereof.	18	17	43
130	G	David		19	17	43
131	A	Silvester		20	16	44
132	B	Jan. 1798. Circu		21	16	44
133	C	Abel		22	15	45
134	D	Enoch		23	14	46
135	E	Methusael		24	14	46
136	F	Simeon		25	13	47
137	G	Ephraim		26	13	48
138	A	Juliana		27	11	49
139	B	S. Epiph.		28	10	50
140	C	Morrell		29	8	51
141	D	Nicanor		30	8	51
142	E	Haginus		31	7	52

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A TABLE shewing how many Years Purchase a Lease or Annuity (to endure for any number of Years under 33) is worth presently, at Interest upon Interest, at Six in the Hundred and shewing plainly how to discount any Lease in being and the value of the Reversion after any number of Years.

10th parts.			10th parts.		
Months.	Years.	Years of a Lease.	Months.	Years.	Years of a Lease.
0	1	1	0	1	1
1	2	2	1	2	2
2	3	3	2	3	3
3	4	4	3	4	4
4	5	5	4	5	5
5	6	6	5	6	6
6	7	7	6	7	7
7	8	8	7	8	8
8	9	9	8	9	9
9	10	10	9	10	10
10	11	11	10	11	11
11	12	12	11	12	12
12	13	13	12	13	13
13	14	14	13	14	14
14	15	15	14	15	15
15	16	16	15	16	16
16	17	17	16	17	17
17	18	18	17	18	18
18	19	19	18	19	19
19	20	20	19	20	20
20	21	21	20	21	21
21	22	22	21	22	22
22	23	23	22	23	23
23	24	24	23	24	24
24	25	25	24	25	25
25	26	26	25	26	26
26	27	27	26	27	27
27	28	28	27	28	28
28	29	29	28	29	29
29	30	30	29	30	30
30	31	31	30	31	31
31	32	32	31	32	32
32	33	33	32	33	33

The Use and Explanation of the
TABLE.

The first Column towards the left Hand, sheweth the Years of a Lease, or Annuity; and right against each Year, is the Years, Months, and Tenth Parts of a Months Purchase, that such a Lease or Annuity is worth.

Example.
Suppose a Lease or Annuity to continue 12 Years, and you would know how many Years Purchase it is worth in present Money, look in the Table for Twelve Years of a Lease to the Left Hand, and against the same you shall find 8, 4, 6, which sheweth that such a Lease is worth 8 Years, 4 Months, and 6 Tenth Parts of a Months Purchase.

AGAIN,

If you are to take or buy the Reversion of any Lease or Annuity, work thus: Suppose the Lease to be thirty Years in a year, you find in the Second Table and Right Hand against Thirty Years, 9 Months, and 2 Tenth Parts of a Months Purchase; this it were worth were it in present Possession. But suppose there be a Lease of five Years (more or less) before you commence, look in the Table against the five Years, and there you shall find 4 Years, 2 Months, and 5 Tenth parts of a Months Purchase: Take this out of the sum against Thirty, which is 13, 9, 2, the Remainder is, 9, 6, 7, which is 9 Years, 6 Months, and 7 Tenth Parts of a Month; and so much is the Reversion after 5 Years, worth the Remainder of 30 Years.

This is Useful, and very Easy.

S A V N D E R, 1707.

The Second Part.

Containing the Eclipses; the Suns Quarterly Ingresses; the Sourcing of the Seven Stars for every Fifth Day of this Year; with Directions for finding the Rising, Southing and Setting of several Fixed Stars: Also Rules and Tables for the Measuring of *Board, Glass, Pavements,* or other superficial Measure; as also to measure *Timber*: And other Things worth Observation.

The Characters of the Twelve Signs, and what parts of the Body they are said to govern.

Aries, Head & Face; ♉ Taurus, Neck & Throat; ♊ Gemini, Arms & Shoulders; ♋ Cancer, Breast & Stomach; ♌ Leo, Heart & Back; ♍ Virgo, Bowels & Belly; ♎ Libra, Reins & Loins; ♏ Scorpio, Secrets; ♐ Sagittary, Thighs; ♑ Capricorn, Knees; ♒ Aquarius, Legs; ♒ Pisces, the Feet.

The Characters of the Planets, with the Dragons Head and Tail, ♄ Saturn, ♃ Jupiter, ♀ Mars, ☉ Sol, ♀ Venus, ♃ Mercury, ☾ Moon, ♀ Dragons Head, ♀ Dragons Tail.

The Aspects.

Conjunction, * Sextile, ☐ Quartile, △ Trine, & Opposition

Brief Chronology of Memorable Things, to this Year, 1707.

The Creation of the World	5656
Noahs Flood	4000
The destruction of Sodom and Gomorrah	3609
The destruction of Troy	2889
Brute entred this Island	2814
The Building of London	2814
The Building of York	2656
The Building of Leicester	2650
The building of Canterbury	2599
The building of Stamford	2570
The building of Rome	2459
The destruction of Jerusalem by T. Vesp.	2620
England first received the Christian Faith	1527
The Tower of London built	1142
	Duke

C

SAUNDER. 1707.

641 Duke William conquered England

608 Westminster Hall was built

512 The Bible divided into Chapters

329 The Invention of Guns

267 The Art of Printing

146 St. Pauls Steeple fired by Lightning

134 New Star in Cassiopeia

134 A great Snow fell Feb. 4:

129 Tilbury Camp on St. James's day

119 A Plague in London, whereof dyed 30598

102 Gunpowder Treason, November 5.

92 A great Snow, and Smithfield paved

82 A great Plague in London, whereof dyed 35418

67 The Long Parliament began, November 3.

59 King Charles the First was Murdered

43 Two Comets appeared in December and March

43 The doleful Plague that followed them

43 London was burnt, September 2, 3, 4, 5

33 The last great Snow

33 The wonderful Comet in December

29 A Comet in August

29 The terrible Fire in Wapping, November 19

29 A great Earthquake, October the 6th

29 The last great Frost

29 The Rebellion in the West

29 The seven Bishops sent to the Tower, June

29 The Prince of Orange Landed, November 5.

29 King William went to Ireland with an Army, June

29 The French Fleet beaten by the English and Dutch, &c.

29 Our most Gracious Queen Mary Dyed, Dec. 28:

29 The Horrid Conspiracy to Assassinate His Majesty King

29 William, and to bring in the French, was happily discovered.

29 The Peace concluded with France

29 War again proclaimed against France, &c.

29 Gibraltar taken by the English & Dutch Fleet, July

29 The Glorious Victory obtained by the Confederates,

29 against the El. of Bavaria and the French, near the

29 Danube; where besides a vast number slain, were

29 taken upwards of 10000 Prisoners, August

29 The Famous Battle of Ramillis, wherein the French

29 were beaten by the Confederates

S A U N D E R, 1707.

Of the Eclipses this Year 1707.

Here will happen this Year to the Earth's Inhabitants six Eclipses, and but one of them (and that of the *Moon*) shall here in *England*.

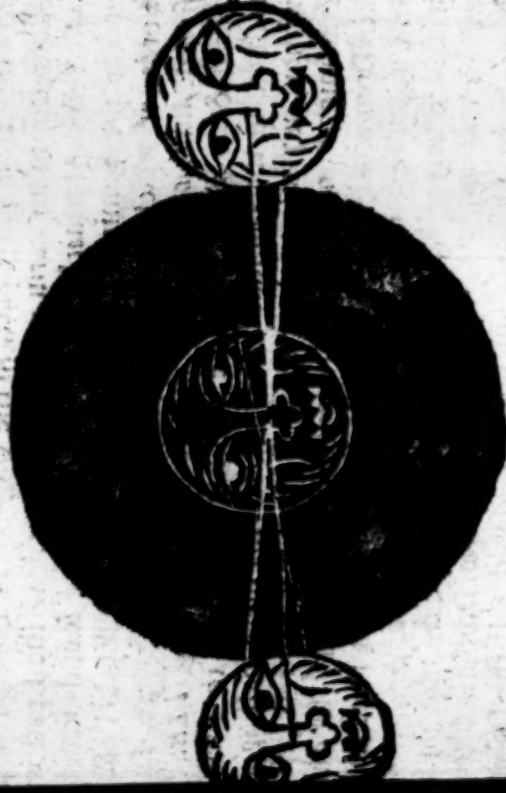
The First is a small Eclipse of the *Sun*, *March* the 22th, half hour after 6 at Night, and visible only to the most Southern parts of the Earth; viz. within or about the Antarctic Circle.

The second is a visible and total Eclipse of the *Moon*, the 11th day of *April*, between 1 and 2 in the Morning. Of which see this account.

	Ho. "
The beginning at <i>Leicester</i> , <i>April</i> 5th, at — 11—29 at Night	
The beginning of Total Darkness, at — 12—34	
The middle. <i>April</i> the 6th, at — 1—23 <i>March</i>	
The end of Total Darkness, at — 2—12	
The full End of the Eclipse, at — 3—17	

A Type of this Eclipse.

Latitude of } at the begin. — 4'—24" North descending
the Moon } at the end — 5 — 33 South ascending



The third is a small Eclipse of the *Sun*, *April* the 21st, about the morning, and is visible only to some parts within the Arctic Circle.

SAUNDER. 1707.

The fourth is a small Eclipse of the *Sun*, September the 14th near midnight, not to be seen by us, nor by our *Antipodes*, but by such only as live Northward of our *Pericæ*.

The fifth is a great Eclipse of the *Moon*, the 30th day of September, at Noon, and therefore not to be seen by us, but by our *Antipodes* about *Zelandia Nova*, also *Hollandia Nova*, the *East-Indies*, *Japan*, also in *Californiæ*, and the North-west parts of *America*.

The sixth is a small Eclipse of the *Sun*, October the 14th near 3 Afternoon, not visible to us, nor to any but within, or near to the *Antarctick Circle*.

The Eclipses of the *Sun* are all of them very small, and seen only to remote parts; therefore their Effects to us are of little. Of Eclipses of the *Moon* Authors say, that, *ultimis 10, Gradibus ☌, magni clarisq; Viri interitum minantur*. Thus much of Eclipses.

A Short Discourse of the Dominical Letters and Epact.

THE Learned, Witty and Civil, Mr. *Will. Salmon*, I find much offended at my taking Notice of his mistake in the Dominical Letter and Epact, in the *Gregorian* or Foreign Account as appears in his warm and short Discourse of the Epact in his last Years Almanack. I expected to have found something said of the Dominical Letter, as well as of the Epact; for words, at which he hath taken such Offence, were, *Find several Almanacks have made Mistakes in the Dominical Letter and Epact, &c.* But it seems he is so Ingenuous, as to allow a mistake in the Dominical Letter, by his silent passing it without any answer thereto; and I find my greatest fault in naming him. To which I answer, had he only set a mistaken Dominical Letter or Epact, as some others have done, had no more named him in my Almanack for 1705, than named others; but he taught and led others into the same mistake, as appears by his Table of the Dominical Letters, where in the Third Column, which should tell the Dominical Letter, in the *Roman, Gregorian*, Foreign or new Account, there is not one Dominical Letter right throughout the whole Circle, and to prevent others from being led into the same mistake

SAUNDERS, 1707.

mistake, there seemed a necessity of naming him. And where-
as he says, I made some Reflection upon him in my Almanack
for 1704, for an oversight in the Kalendar : *Note*, It was in
the Year 1701, and not in 1704, that I took notice of that
oversight. As to the Epact, in Paragraph or Section the se-
cond of his short Discourse, *The said Saunders*, says he, (though
he never knew me write my Name as he hath writ it, yet I presume
I am the Man he means); *this Man* (says he) is *admirable at find-
ing faults*, &c. *even where there is none*. And in the end of
Section the third, ——— And according to his *Erroneous Notion*
he hath given in his *Almanack* for 1705, a *Learned Table* of
Epacts.

To which I Answer, That this *Learned Table* of Epacts (as
he is pleased in his scoffing way to call it) is agreeable to what
he reaches in his Almanack for 1704, (except one Number in
the 19, which I had made 30; but according to Mr. *Salmon*
must have been 0, or nought, and which he now would have
be 1 :) For there he says, " By subduſting 11, from the
" Epact of the old Account, you have the Epact of the Ro-
" man, Gregorian, or new Account; but if the Epact is less
" than 11, then add 30 to it, and make subtraction as be-
" fore, so shall you have the Epact of the new Account. :
" This will hold true after *Anno* 1700. These are his very
words. And indeed thus it ought to be; for as the Roman
Account is now 11 days before ours, their Epact ought to be
11 less than ours. Now when the Golden Number is 1, our
Epact is 11, from which subduct 11, there remains nothing,
or 0. Now rather than set 0, I set 30, which is much the
same as if I had set 0. At this Mr. *Salmon* bounces, and chal-
lenges me to prove, that ever the *Moon* was 30 days old since
the World began. To which I answer, That though the *Moon*
Astrickness, is never fully 30 days old, yet in vulgar Compu-
tation, she hath often been supposed or accounted so. Mr.
own allows that there is 29 days and a half between Change
and Change; and there is some Minutes more: And though
Mr. *Salmon* says, that the day of the *Moon's* Change is not ac-
counted for any day of her Age, whether it be in respect of
the beginning or end thereof, so that at most she is never said
to be above 29 days old; yet Mr. *Vincent Wing*, and Mr. *Lyn-
n*, in their *Urania Practica*; nay, pag. 126, in their Table

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to find the *Moon's* Southing by her age, have set in the Column under the Title, the *Moon's* age for her Southing, 13 30, as supposing her to be 15 days old at the Full, and 30 at the Change, and then to be South at 12. And several of our ancient Writers, viz. *Gadbury*, *Mr. Patriage*, *Andrews*, and several others, have set the *Moon's* age 30 days, yet *Mr. Salmon* says, she is never said to be above 29 days old. But indeed did not very well approve of that number 30 in the Table, and therefore altered it, before I heard from *Mr. Salmon*, as you may see in my last Year's Almanack; but not to 1, as he would have it, but to 29; which I doubt not but will be found as agreeable to the Truth, as his 1 will be.

I found not fault with his Rule of subtracting 11, but with his saying, that when the Golden Number is 1, 4, 7, 10, 13, 16, 19, in the Foreign Account the Epact is the same, which contradicts his former Rule. Now he shuffles, and says, that out of that Rule some Numbers are excepted, which are before-enumerated 7. Why did he not tell us so at the first when he set that Rule? We should as soon have believed him then as now. He allows that the General Rule is not always infallible; and tells us where it failed: And when he has done, he would make the failure of the Rule an Error in me, because I have made the Epact 4 in the Gregorian, when it is 15 in the Old Account. But this is according to his Rule of subtracting 11, and is none of his 7 Numbers excepted: So that to say the same thing with *Mr. Salmon* is an Error in me, but not in *Mr. Salmon* when he is pleased to say so. An Example or two of the agreement of the Epacts with the *Moon's* age. First, in the last Year 1706, the *Moon* changed the day of *February*, and therefore on our 17th, or the 28th of the New Style, the *Moon* can be but 15 days old, agreeable to my Table; but *Mr. Salmon* would have it 16. So this Year 1707, the *Moon* changeth *January* the 22th, and therefore on *February* the 17th Old Style, or 28th New Style, can be but 26 days old; but *Mr. Salmon* will have the Epact 29. Once more, viz. 1710, the *Moon* changeth *February* the 19th Old Style, that is, the 28th New Style, and therefore cannot be 1 day old, as *Mr. Salmon* would have the Epact 1 in the Foreign Account, but rather 29, as I have set it for the Year.

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The plain matter is this; Mr. *Salmon* having plundered Mr. *Wing's* and Mr. *Leybourn's Urania Præctica* afore-mentioned, for Dominical Letters, Epacts, Numbers of Direction, &c. hath writ the same that is there writ. This Book was Printed about the middle of the last Century of Years, and was doubtless agreeable to that Century. The Foreign Account was then but 10 days before ours, and accordingly their Epact then was 10 less than ours: But the Year 1700, not being Leap-Year in the Foreign Account, their Dominical Letter must alter; and their being now 11 days before us in their account of days, their Epact ought to be 11 less than ours; which I have made accordingly. And whereas Mr. *Salmon* hath charged me with Malice, Envy, Incivility, Ignorance and Folly, &c. I shall leave it to every sober and judicious Reader to judge; whether his Discourse or mine smells most of either; and shall conclude that, *Humannum est errare, perseverare Diabolum.*

Of the Four Quarters of the Year.

Spring Quarter begins *March* the 10th, 19 minutes past 6 in the Morning.

Summer Quarter begins *June* the 11th, 22 minutes after 7 in the Morning.

Autumn Quarter begins *September* the 12th, 6 minutes after 9 at Night.

Winter Quarter begins *December* the 11th, 39 minutes after 10 in the Morning.

To find the Rising, Setting and Sitting, of several fixed Stars here after mentioned.

IN the Tables following you have first the seven Stars Southing for every fifth day: in the second Table is set the difference betwixt the Southings of those Stars therein named, and the seven Stars, which being added to the time of the seven Stars Southing, giveth

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giveth theirs. In the same Table is also set their semidiurnal Arches thereby to find the rising and setting of the said Stars. Suppose it is required to know what time the great Dog-star, called *Syrinx*, will be South the 11th. of *February*? I then find the Seven Stars South at 5 ho. 10 min. to which I add 3 ho. 2 m. the difference annexed to the great Dog-Star, and it makes 8 ho. 12 min. being the time of its Southing the said 11th of *February*. If to the Southing you add the Semidiurnal Arch 4 ho. 31 min. it giveth the time of its setting at 12 ho. 43 min. but if you subtract the Semidiurnal Arch from the Southing, it leaveth the time of its Rising. The like may be done by any other of the said Stars.

For the better distinction of the several sizes of Stars they are divided into six several magnitudes, The biggest and brightest Stars are called Stars of the first Magnitude. Those one size inferior in light, and bigness are called Stars of the second Magnitude &c. Now for the better knowing the Stars hereafter-mentioned Note, that the great Dog-star, Lions Heart, Virgins Spike and the bright star of *Lyra*, are accounted stars of the first magnitude, &c. are also *Aldebaran* and *Arcturus*, but they are Red stars much of the colour of *Mars*, all the rest in the Table are of the second magnitude, except the Northern and Southern *Affs*, which are small Stars being of the fourth magnitude.

A Table shewing the Hour and minute of the Seven Stars coming to South, every 5th day of this year, 1707.

Moneths	Days of the Moneth.											
	H.	M.	H.	M.	H.	M.	H.	M.	H.	M.	H.	M.
January	7	A 57	9	A 36	7	A 14	6	A 53	6	A 32	6	A 12
February	5	A 45	5	29	5	10	4	51	4	32	4	14
March	4	A 03	4	13	4	23	3	42	4	46	2	28
April	2	A 71	48	1	30	1	11	0	52	0	31	31
May	0	A 14	11	M 54	11	M 34	11	M 14	10	M 53	10	M 38
June	10	M 89	47	9	26	9	6	8	45	8	25	25
July	8	M 57	45	7	24	7	4	6	45	6	31	31
August	6	M 35	45	5	26	5	8	4	49	4	41	41
September	4	M 10	3	52	3	34	3	17	3	02	46	46
October	2	M 22	3	1	44	1	25	1	50	10	32	32
November	0	M 22	0	2	11	A 39	11	A 16	10	A 54	10	29
December	10	A 11	9	A 49	9	26	9	4	8	41	8	20

A Table

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Table shewing the difference in hours and minutes between the coming to South of several fixed stars, and the seven stars, is also their semi-diurnal Arches thereby to find their rising and setting.

Names of the Stars.	Diffe. (semi-d. South.		Names of the Stars.		Diffe. South.		semi-d. Arches		
	b.	m.	b.	m.	b.	m.	b.	m.	
Debaran B. eye	0	49	7	28	Lions heart, Basil.	6	23	7	13
in Orions Girdle	1	51	5	54	Virgins Spike	9	40	5	9
Dog. Syrius	3	24	31	47	Arcturus	10	32	8	0
for 1st. head II	3	46	9	47	South ballance	11	54	4	40
Dog. Procyon	3	54	6	32	North ballance	11	31	5	16
lux, 2d. head II	3	57	9	4	Northern Crown	11	52	8	55
northern Aft.	4	56	8	12	bright * Lyrae	14	57	lets not	
northern Aft.	4	58	7	49	bright * Vulturis	16	6	6	43

The followeth some few Rules, and Tables for the mensuration of Superficies and Solids.

For the Mensuration of superficial or flat measures, such as Board, Glass, Pavement, Hangings, &c. it will be necessary to know how to measure any plain superficial figure, as Square, Long-square, or Parallelogram, Triangle, Circle, &c. of the Circle, &c. examples of all which do here follow.

I. How to measure a Square.

Let there be a square floor, or pavement, the sides whereof are each of them 5 feet 6 inches, 'tis required to know how many square, or superficial feet are contained therein. First (a plain way to avoid Fractions will be to) Reduce the whole side into inches, 5 feet, 6 inches, being 66 inches, multiply 66 by 66, and the Product will be 4356, the superficial content in inches; then divide 4356 by 144 (the square inches in one foot) and the quotient will be 30 feet, and inches remaining, which is the number of inches in one quarter of a foot; so that in such a square is contained 30 feet and one quarter. See Margin.

66

66

396

396

4356

4356

144

(30

432

36

11. 74

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II. To measure the Long-Square or Parallelogram.

Suppose there be a Pavement whose length is 72 feet, and breadth 12 feet, how many feet is contained therein.

Multiply 72 in length, by 12 the breadth, and the product will be 864, and so many superficial feet are contained in that Pavement.

III. To Measure a Long Superficies, which is broader at one end than at the other.

Let there be a superficies whose length is 72 inches, the breadth of the greater end 50 inches, and the breadth of the lesser end 34 inches, and let it be required to know how many feet are contained therein. First, add the breadths of both the ends together, which maketh 84, take half thereof, which is 42, which being multiplied by 72 the length, the product will be 3024 the content in inches, which being divided by 144 (the inches in one foot) the Quotient will be 21 feet, and nothing remaining, so that there is exactly 21 feet in such a superficies.

IV. How to measure Triangles.

All Right lined Triangles are measured by this general Rule. Multiply half the length of the Base by the whole Perpendicular. Or, the whole length of the Base by half of the Perpendicular. Suppose the Base of a Triangle be 44, and the Perpendicular 26, what is the Content.

Multiply 44 (the Base) by 13, (half the perpendicular) the Product will be 572 : Or 22 (half the Base) being multiplied by 26, (the whole perpendicular) the Product will be 572 before, which is the Content of such a Triangle.

V. All *Trapezias*, or Figures with four unequal sides ; Multangular, or many sided irregular Figures, must be divided into Triangles, and those Triangles measured as before is tan and their sums added together will give the content of such irregular Figures. And note, that the least number of Triangles, into which any plot or irregular figure may be reduced, will be by two than the number of the sides of such irregular figures.

VI. How to measure Circles, and parts of Circles.

The Diameter of every Circle hath such proportion to its circumference of the same Circle as 7 hath to 22. There

the Diameter being given to find the circumference, you must multiply the Diameter by 22, and the product being divided by 7, the Quotient will be the circumference. Thus, supposing the Diameter of a Circle be 14, multiply 14 by 22, the product will be 308, which being divided by 7, the Quotient is 44, being the circumference of that Circle whose Diameter is 14.

Having the Circumference to find the Diameter.

Multiply the circumference given by 7, the product divide by 22, and the Quotient will be the Diameter. Let the circumference of a circle be 60, multiply 60 by 7 the product will be 420, which being divided by 22, the Quotient will be 19 $\frac{2}{11}$ or $\frac{212}{11}$ which is the Diameter.

To find the Area or Superficial content of a Circle. Multiply half the circumference by half the Diameter, the product is the content of the Circle: Thus, Let the circumference be 60, the half whereof is 30, and the Diameter 19 $\frac{2}{11}$ the half whereof is 9 $\frac{1}{11}$, by which multiplying 30, the product will be 270 $\frac{10}{11}$ which is the superficial content of such a Circle; or, By the Diameter to find the Area of the circle. First, square the Diameter, multiply the square by 11, and divide the product by 14, the Quotient is the superficial content of the circle. Let the Diameter be as above 19 $\frac{2}{11}$ the square whereof is 376 $\frac{4}{121}$ this multiplied by 11 produceth 4140 $\frac{4}{11}$ which being divided by 14 the Quotient is 295 $\frac{4}{7}$ as above, being the superficial content of such a circle.

To measure the superficial content of half the circle, the content of a circle, or of any other section of a circle, more or less, having the semidiameter given.

Multiply half of the compass thereof by the semidiameter of the circle, so shall you have the content.

Of the Mensuration of Solids.

A Plain or Superficial Measure consisteth of two dimensions, namely, length and breadth; so Solid measure consisteth of three dimensions, namely, length, breadth and thickness. To measure any kind of Timber, either Square, Triangular, Round, or of any other Fashion, provided it be straight and equal all along.

Cast up the superficial Content at the end thereof, by the length before going, for the finding the Content of the Square, Triangle, Circle, &c. which Superficial Content being multiplied

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plied by the length of the Piece, will give you the Solid Content thereof. *Example.* Let there be a piece of Timber, other solid matter) whose breadth is 18 inches, its depth inches, and length 142 inches, to find how many solid feet contained therein. First, multiply the breadth 18 by the depth 13, the product is 234, being the superficial inches at the end of the piece. Secondly, multiply this 234 by 142 the length of the piece, and the product will be 33228, the solid Content in inches. Thirdly, divide 33228 by 1728, (being the number cubical inches in one solid foot) and the quotient will be 19, 396 inches remaining, which is 19 solid feet, and almost a quarter of a foot, and so much is the solid content of such a piece.

A 2d Example of a round piece. Let there be a round piece of Timber whose compass is 60 inches, and the length 20 feet, (240 inches) and let it be required to find the solid content thereof. First, by the help of the circumference 60, find the Diameter (as before is taught) by multiplying 60 by 7, and dividing the product thereof by 22, so shall you find the Diameter to be 19. Then by either of the ways before taught, *viz.* by multiplying the circumference by $\frac{1}{2}$ the Diameter; or by (squaring, or) multiplying the Diameter in it self, and multiplying that square by 14, and dividing the product by 14, the superficial content of the end of such a piece will be found to be $286\frac{4}{7}$ inches. Now multiply this $286\frac{4}{7}$ by the length of the piece 240, and the product will be $68727\frac{1}{7}$ the content in inches, which being divided by 1728, the quotient will be 39 feet, and $\frac{1}{4}$ of a foot, and $39\frac{1}{4}$ inches remaining, which is the solid content of such a piece of Timber. But had this piece of Timber been measured by that egregious false way of taking $\frac{1}{4}$ part of the Girt for the side of the square, it would have been found to be but 31 feet and $\frac{1}{4}$ of a foot, which is above $\frac{1}{2}$ part less than the truth, it being 39 feet, & above.

In behalf of that erroneous way many do plead, that in round Timber there is great loss in chipping to bring it near a square; therefore that way may be allowed; but this is very unequal in great Timber there being little loss, in small Timber much. Let therefore the quality be considered, rather than make such unequal amends by a false quantity.

Of the Mensuration of Tapering Timber, either round or squared, such as Frustums of Cones and Pyramids.

First find the superficial Area of each end of the piece, and multiply the one Area by the other. Secondly, out of

the product of the two Area's, extract the Square Root. Thirdly, add this Root and the two Area's all into one sum, multiply this sum by one third part of the length of the piece, and that product shall give you the Content.

Let there be a piece of Timber whose Circumference at the greater end is 66 inches, at the lesser end 44 inches, and the length 20 feet, and it is required to find how many solid feet it contained therein. First, the Area of the Circle at the greater end (by multiplying half the Circumference 33 by half the Diameter $10\frac{1}{2}$) will be found to be $346\frac{1}{2}$, and the Area of the Circle at the lesser end will be 154: These multiplied together do produce 53361. Secondly, out of this product extract the Square Root, which is 231, (for 231 being multiplied by itself produceth 53361). Thirdly, add the two Areas, and the Square Root 231 together, and the sum of them will be 315. Lastly, multiply $73\frac{1}{2}$ by 80 inches, (one third part of the length) and the product will be 58520, being the solid inches contained therein, which inches being divided by 128, the Quotient will be 33 feet, and 1496 inches remaining, which is 3 quarters of a foot, and almost half a quarter.

To find the Content of Tapering Timber, other ways than is taught above.

These pieces being parts of Cones or Pyramids, their Contents may be found by seeking the Content of the whole Cone or Pyramid, (of which they are part) and the Content of that part which is wanting, for that part being subtracted from the whole, the remainder must be the Content of the part required. Now the way to find the content of a Cone or Pyramid is, to multiply the superficial Content of the Base by one third part of the length; and to find the length of the top part of a cone or Pyramid which is wanting; say thus, As the difference of the sides, or Diameters of the two ends, to the length between them; so is the side, or Diameter of the greater end, to the whole length. *Example*, of the piece before mentioned, whose greater end is 66 inches about, and the lesser end 44; since the Diameter of the greater end will be 21, and the Diameter of the lesser end will be 14, and their difference is 7, therefore say, If 7 give 20 feet what will 21 give? Answer, 60 feet; being the whole length of the Cone: Now the superficial content

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content of the Base of this Cone, (being $346\frac{1}{2}$ inches) multiplied by 240 inches, (one third part of the length of the whole Cone) produceth 83160 inches, the content of the whole Cone. And the superficial content of the lesser end, (which is the Base, of the top (or wanting) part of the Cone) which is 152 being multiplied by 150, (one third part of the length of the top (or wanting) part) produceth 22800 inches, the content of the wanting part, which being substracted from 83160, (the content of the whole Cone) the remainder is 58520 inches, the content of the part required, being the same as before.

Here followeth Tables ready calculated, for the Measuring of Squared or Round Timber, which is supposed to be equal along: Their Use is thus; seek the side of the Squared, or compass of the Round Timber, in the first, third or fifth column of the Tables, and against it, in the next column, you have the length of a solid foot. Thus, the side of a squared piece of Timber being 20 inches, the length of a solid foot will be 4 inches and 3 tenth parts of an inch: And the compass of a round piece, being 80 inches, the length of a solid foot will be found to be 3 inches, and 39 hundredth parts of an Inch.

A Table, shewing how much in length will make a Solid Foot of any Square Stone or Timber: The side of the Square being given in Inches, from 1 Inch to 36 Inches square.

Side of the Square.	Length of a solid foot	Side of the Square		Length of a solid foot.		Side of the Square		Length of the solid foot.	
	Fe. inc. 10ths	Inch.	10ths	Inch.	10ths	Inch.	10ths	Inch.	10ths
1	144 0 0	13	2	10	8	25	2	8	
2	36 0 0	14	8	8	6	26	2	6	
3	16 0 0	15	7	7	6	27	2	3	
4	9 0 0	16	6	6	7	28	2	2	
5	5 9 2	17	5	5	9	29	2	1	
6	4 0 0	18	5	5	3	30	1	9	
7	2 11 2	19	4	4	8	31	1	8	
8	2 3 0	20	4	4	3	32	1	7	
9	1 9 3	21	3	3	9	33	1	6	
10	1 5 3	22	3	3	5	34	1	5	
11	1 2 3	23	3	3	3	35	1	4	
12	1 0 0	24	2	2	0	36	1	3	

A Table

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Table shewing how many inches in length will make a foot
 half, of any round piece of Timber or Stone, the Girt being
 given, from 12 inches compas to 100.

len. of a foot		Com. len. of a foot		Com. len. of a foot	
Inch.	100 p.	Inch.	100 p.	Inch.	100 p.
179	46	41	12	71	4
150	80	42	12	72	4
128	49	43	11	73	4
110	79	44	11	74	3
94	31	45	10	75	3
84	82	46	10	76	3
75	14	47	9	77	3
67	02	48	9	78	3
60	15	49	8	79	3
54	29	50	8	80	3
49	23	51	8	81	3
44	86	52	7	82	3
40	90	53	7	83	3
37	69	54	7	84	3
34	74	55	6	85	2
32	12	56	6	86	2
29	79	57	6	87	2
27	70	58	6	88	2
25	82	59	6	89	2
24	13	60	5	90	2
22	60	61	5	91	2
21	21	62	5	92	2
19	92	63	5	93	2
18	78	64	5	94	2
17	74	65	4	95	2
16	76	66	4	96	2
15	86	67	4	97	2
15	04	68	4	98	2
14	28	69	4	99	2
13	57	70	4	100	2

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From Leethestorp near Melton-Mowbray, in the
County of Leicesters, Aug. 21. 1706.

F I N I S.